CLAIMS

1. A screening method for regulatory enzymes, the method comprising the construction of tribrid cells containing genes encoding an expression library of putative enzymes, a bait protein or polypeptide fused to a known DNA binding domain and a prey protein which is an antibody that recognises a protein or polypeptide which has been post translationally modified, the prey protein being attached to a known protein active domain, whereby, in use, binding or recognition of the bait protein or polypeptide by the prey protein or polypeptide upon post-translational modification by an enzyme contained in the expression library, causes transcription of a reporter gene or genes which allow recognition of the enzyme activity.

2. A method according to claim 1, in which the cell is a eukaryote.

3. A method according to claim 1 or claim 2, in which the cell is a yeast cell.

4. A method according to any one of claims 1 to 3, in which the enzyme is involved in the post-translational modification of nascent proteins or polypeptides.

5. A method according to claim 4, in which the enzyme is involved in the regulation of phosphorylation, glycosylation, sulphonation, acetylation, side chain modification, nitrosylation, ubiquination, myristoylation or palmitoylation.

6. A method according to claim 4 or claim 5, in which the enzyme is a kinase or a phosphatase.

7. A method according to any preceding claim, in which the bait protein is an oncoprotein, a kinase, a phosphatase, a receptor protein, an adapter protein or a scaffolding protein.

8. A method according to any preceding claim, in which the prey protein is conformationally constrained within the cell.

9. A method according to claim 8, in which the prey protein is conformationally constrained by linkage of the carboxy and amino termini of the protein.

10. A method according to any preceding claim, in which the prey protein further comprises an epitope tag to enable rapid detection of fusion protein synthesis.

11. A tribrid cell for use in the method of claims 1 to 10, said tribrid cell being engineered to express an enzyme or putative enzyme from a cDNA library, a bait protein or polypeptide fused to a known DNA binding domain and a prey protein which is an antibody that recognizes a protein or polypeptide which has been post translationally modified, the prey protein being attached to a known protein active domain, whereby, in use, binding or recognition of the bait protein or polypeptide by the prey protein or polypeptide upon post-translational modification by the enzyme from the cDNA library causes transcription of a reporter gene or genes which allow recognition of the enzyme activity.

12. A tribrid cell according to claim 11, in which the cell is a eukaryote cell.

13. A cell according to claim 11 or claim 12, in which the cell is a yeast cell.

14. A method substantially as hereinbefore described with reference to and as illustrated by the Examples.

15. A cell substantially as hereinbefore described with reference to and as illustrated by the Examples.